

# CA JOURNAL

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## Cities Assured Ownership Of Ports Under Federal Aid

Airports built through federal aid will belong to the cities that build them, and not to the federal government, Charles B. Donaldson, Assistant Administrator for Airports, said in a statement read to the American Municipal Association at their meeting in Chicago, November 20.

"Once a federal-aid airport is completed, it will become the owner's responsibility to operate and maintain it for public use, in accordance with the Federal Airport Act," he said. "The CAA's only interest thereafter is to know that the airport is so operated and maintained. To those communities who ask for advice on sound airport management practice, we will give expert guidance to the extent of personnel available. The CAA has no intention, however, of looking over your shoulder as you conduct the day-to-day operations of your airport. It will be your airport, and you will be free to operate it just as you would your fire department, your parks, or any other public utility."

**Next on Schedule**—The CAA expects to complete the National Airport Plan this month by listing the class and general location of airports which should be built during the next three years to meet immediate needs.

"Under the authorizing legislation, federal aid can be given only to airports listed in this plan. Listing of an airport in the plan, however, does not guarantee an allocation of federal funds," Mr. Donaldson pointed out.

"The community concerned must submit a project request to the CAA indicating interest and willingness to participate in the program. These requests received from the various local and state governments are the basis for formulating the annual program.

"Some time late in December, the CAA hopes to announce the program for the fiscal year ending June 30, 1947. This will include that portion of the three-year plan for which proper project requests have been received and approved. Submission of the project request in good order indicates that the community is ready to proceed with its part of the job, while approval by the CAA will be based on a study indicating that the project deserves a priority rating based on user need among the items listed in the three-year plan.

"Once a grant agreement has been executed, the local public agency can proceed to advertise for bids

and award contracts. On this basis, it should be possible for construction to start this coming spring.

"As the Federal Airport Act now stands, the CAA during the current fiscal year is not permitted to

(Continued on page 158)

## Eye Refraction Test Dropped From CAA Requirements

The eye refraction test has been dropped from the commercial pilot physical examination required by the Civil Aeronautics Administration.

The refraction test is not necessary to flying safety, the CAA regional administrators agreed at their November meeting in Washington, after studying recommendations made by CAA field officials.

The requirement for the refraction test was adopted April 30 upon recommendation of the committee on medical problems in civil aviation of the National Research Council, and has been under observation for five months by CAA officials in the field.

The recent appointment of regional medical officers makes it possible to maintain "grass roots" liaison with the examining physicians, thus insuring a high standard of physical examination. This also was a factor in the decision to rescind the refraction requirement.

With the rescinding of this order, the specific fee set by the CAA for the examination, including the refraction test, is eliminated. No specific fees for physical examinations for pilots of any class are now set by the CAA.

In announcing this change, CAA Administrator T. P. Wright stated: "I am convinced that physicians appointed to examine commercial and airline pilots, as well as family physicians who examine the private pilot, will give thorough and careful physical examinations at reasonable rates."

## Easier to Register Planes than Cars By New System

Airplane registration has been made easier than automobile registration under a new system which went into effect November 15. Sweeping changes in licensing procedure permit an airplane purchaser to write his own 60-day temporary registration certificate, and also allow use of "dealer's tags" on new planes.

**Three-part Form**—A single form, ACA-500, available from any regional or district CAA office, will take care of the plane owner's registration needs. This form comes in three parts, with a provision for making a carbon copy of each part.

Part A, "Registration Certificate," shows the name and address of the purchaser, the aircraft make and serial number. It is filled in by the purchaser.

Part B, "Application for Registration," requires similar information and is likewise filled in and signed by the purchaser.

Part C, "Bill of Sale," must be executed by the seller, and must be notarized.

**Ten Minutes Time**—Completing all three parts of the form requires only about ten minutes, but it is important that it be done accurately. The purchaser posts the original of Part B in the cockpit of his plane, where it serves as a temporary registration certificate. He keeps the original of Part C for his own protection. Then he mails the rest of the form consisting of the original of Part A and carbons of Parts A, B, and C to the Registration and Recordation Section, Civil Aeronautics Administration, Washington 25, D. C., with a \$5 fee.

The airplane purchaser can then fly his plane for 60 days on the authority of the certificate in the cockpit. Long before the time limit is exhausted, the original of Part A will come back from the CAA office with necessary signatures. The purchaser then destroys his temporary certificate and posts Part A, which is his permanent registration.

**Dealer's Tags**—The "dealer's tags" may be used by manufacturers, distributors and dealers for ferrying and demonstration of new aircraft. They are good

(See Plane Registration, page 151)

# PICAO Technicians Select ILS And Omni-ranges for World Use

The instrument landing system and VHF omni-directional range developed by the Civil Aeronautics Administration are among the air navigation radio aids recommended for international use by the Provisional International Civil Aviation Organization.

The PICAO Radio Technical Division announced its recommendations November 23 after a three-week meeting in Montreal. Prior to the meeting the PICAO technicians from 28 countries viewed demonstrations, staged by the United States, the United Kingdom and Australia, of the best civilian and military equipment available to civil aviation.

Standards were recommended for each category of air navigation aids: instrument approach and landing systems, short and long range navigation systems, and aerodrome zone aids.

**Instrument Landing System**—The best equipment currently available for instrument approach, the Radio Division agreed, is an improved version of the localizer-glide path system largely used during the war under the name of SCS51. This is the type of instrument landing system now being installed by the CAA at major airports in the United States. The Division recommended that this system be installed on all airports used for international air traffic as soon as possible, and in any event not later than Jan. 1, 1951; and that it be kept in operation at each airport at least until Jan. 1, 1955. Distance-measuring equipment is to be added as soon as possible, and ground radar supplied wherever traffic is great enough to make this useful. In the meantime, development work is to be continued with the object of producing an instrument landing system to control aircraft automatically during approach and landing.

**Short Range Navigation**—Although the Division found that there is no device sufficiently proved at this time to justify universal adoption as the sole aid for short range navigation purposes, it recommended that the very high frequency omni-directional range, together with distance-measuring equipment, be installed as soon as practicable on international trunk routes where short range aids are required, and be kept in operation until Jan. 1, 1955. The specific locations are to be decided by PICAO regional meetings. Development of other short range navigation equipment is to be continued.

**Long Range Navigation**—Low frequency Loran, the Division agreed, is the long range system which

offers greatest promise of meeting the operating requirements among those now available. Standard Loran installations are now operating in important ocean areas. These should be retained, the Division decided, as well as all other long range navigation systems now in operation, until one standard system can be adopted. A priority list was drawn up for the installation of LF Loran equipment on the international air routes of the following regions: North Atlantic, to be installed by January, 1949; and Southeast Asia-Australasia, Africa, Pacific Area, and South Atlantic Area, by January, 1951.

**Aerodrome Zone Aids**—As the best solution for determining the position of aircraft, vehicles and obstacles on an airport, the Division recommended use of high discrimination radar. Aerodrome zone aids are designed to expedite the ground travel of aircraft and surface vehicles in poor visibility on the movement areas of airports. At busy airports the speed of clearing runways is a factor limiting the amount of traffic that can be handled. The Division suggests that research be continued on inductive signalling systems, but that in the meantime communications with aircraft and vehicles continue primarily by radio-telephone, as at present.

Dr. Edward Warner, President of the PICAO Council declared that the agreement represents one of the greatest advances made by PICAO in bringing about uniformity in the facilities and services used by international air transport.

**One System on World Routes**—"When the Division's recommendations are carried out," he said, "civil aircraft will be able to use a uniform navigational system as they fly along the main international air routes of the world. This will result in a simplification of air crew training and a much lower financial burden to airline operators and governments than if the present measures for uniformity were not being taken. The program will contribute to safe, regular and efficient flight. At the same time, the way is left open to the progressive development of new types of equipment and new techniques, and for their introduction in world-wide use at appropriate times."

## October Count Shows 4,361 Airports

A total of 4,361 civil and military airports were operating in the United States on October 1, when applications by project sponsors for funds under the new Federal Airport Act began to be considered.

Civil airports in operation October 1 numbered 3,566 as compared with 3,475 July 1. The number of commercially operated airports was increased by 63, that of municipal airports by 44. CAA intermediate landing fields decreased from 209 on July 1 to 202 on October 1. Airports operated by the military services fell to a new low, with 795 on October 1, as compared with 831 on July 1. Of this total, the

Army has 206 civil fields and the Navy 70 fields which were taken over during the war. These fields are gradually being returned to civil use.

Although the total number of airports showed only a small increase in the past quarter, it is significant that the smaller fields (below Class III) accounted for the bulk of the net gain. Class I fields are used principally by the owners of smaller aircraft. Class II airports can be used by owners of small planes as well as by owners of larger planes and feeder transports. Four airports were added to the Class IV and over group, used by large transport planes.

United States Airports on October 1

Date	Total	Type of Operation					Size Classification				
		Commercial	Municipal	CAA Intermediate	Military	All Others	Sub I <sup>1</sup>	I	II	III	IV & Over
October 1, 1949	4,361	1,823	1,383	202	795	158	486	1,334	1,208	486	847
July 1, 1949	4,306	1,760	1,339	209	831	167	496	1,301	1,178	488	843

<sup>1</sup> Indicates airports which exist but do not come up to Class I standards.

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## CAA Radio Station Helped Dreamboat's Non-stop Flight

The international radio network operated by the Civil Aeronautics Administration played an important part in the record-breaking non-stop flight of the Army's B-29 "Dreamboat Pacusan" from Honolulu to Cairo, Egypt, early in October, reports received by the CAA reveal.

**Relayed Reports to Hawaii**—From July 15 to October 4 the crew of the Dreamboat, waiting at Hickam Field, Hawaii, received hourly weather reports relayed through the powerful 20-kilowatt CAA station KCJ at Everett, Wash., 30 miles north of Seattle.

The weather reports came from observation stations along the Canada-Alaska part of the route, and from Army weather observation flights over the Pacific. The KCJ transmitter transmitted the reports directly to Hickam Field.

After the take-off early in the morning of October 4, CAA operators at KCJ maintained contact with the plane all the way across the Pacific and over Arctic waste lands until it reached the vicinity of the North Pole.

"The Dreamboat was well equipped with excellent transmitters and receivers," says a report from the CAA regional office at Seattle. "The flight employed a wide selection of frequencies and experienced little or no difficulty in establishing contact with commercial, Army, Navy, CAA and amateur stations. Signals were exceptionally good while the flight was over the Pacific, Canada, and Alaska.

"Messages were exchanged without difficulty between KCJ and Dreamboat, and many weather and other traffic reports were relayed to the airplane when other stations were unable to make contact.

**Last Contact at North Pole**—"The last contact with the flight was made while the aircraft was near the North Pole, at which time the operator reported a spectacular Aurora Borealis and extremely erratic and fading signals. Soon afterwards, the Dreamboat established contact with an Army station in Greenland."

KCJ is one of four high-powered radio stations maintained in the United States by CAA for contact with overseas flights and airfields outside the country. During the war, it was an important link in Army communications with Alaska. At present, it is serving aircraft operations between the United States and Alaska, and over the northern route to the Orient.

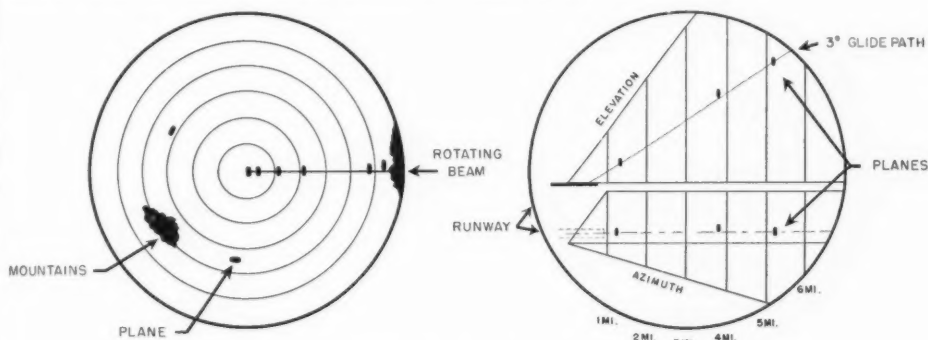
CIVIL AERONAUTICS JOURNAL

# Three Big Airports to Be Test Sites For Use of Radar as Control Aid

Use of radar as an aid to airport traffic control in civil aviation will begin at three large airports early in 1947 when the Civil Aeronautics Administration will test the equipment under operating conditions at the New York, Chicago and Washington airports.

Installation of the equipment, which is a modification of the ground-controlled approach system originally developed for the military services, will be started at the three airports soon after January 1.

to accurately "see" the positions of the aircraft at all times. He will know when a plane has turned right or left without having to wait for the pilot's report by radio.



Shown on the left is the search scope, and on the right the precision scope

During the past year the CAA and the manufacturer of the equipment have cooperated in a testing and modification program which has resulted in improvement of the GCA equipment used by the military services during the war. This equipment required a five-man crew located in the trailer on the airport. Initial development at Indianapolis, scene of the modification work, reduced the crew requirements to two men, thus reducing expense of operation.

**Scopes Moved to Tower**—The installations at the three airports represent further development of this system, with the viewing screens (scopes) and personnel moved from the trailer into the tower. Output of the trailer-truck, housing the equipment, will be piped to two 12-inch scopes in the tower where one controller will keep watch on them. One radar operator for each watch will be added to the regular tower staff for this purpose.

The search scope in the tower gives the controller a plan picture of traffic within a 30, 15 or 7½-mile radius of the airport, with the controller able to select the radius he desires by turning a switch. The planes show up as "pips" or dots of light, and the position of the dots on the scope show the direction and distance the planes are from the airport.

The precision scope, which is aligned with the localizer and glide path of the instrument landing system, has two types of indication. The upper half shows the plane's distance and elevation with respect to the normal glide path. The lower half shows the distance the plane is from the runway, and any deviation it makes to the right or left of the centerline of the runway. This scope has a 6-mile range.

**Will be Extra Aid**—The CAA expects to use this modified GCA system, in its present stage of development, as an extra aid to the already installed instrument landing systems, and the present method of traffic control.

The tower operator will be able to "see" an aircraft, making an instrument landing, during its approach from the holding point and can advise the pilot of his position with respect to the localizer and glide path of the ILS.

From the standpoint of traffic control, the controller can make certain that he is providing adequate separation for he will be able to "see" how far the planes are from each other. He will also be able to expedite departures and arrivals, since he will be able

The CAA operators and maintenance personnel are now at the factory in Los Angeles receiving instruction on how to operate and maintain the system.

**Army Providing Equipment**—The three sets of radar equipment, valued at more than \$500,000, are being provided by the Army Air Forces. Installation costs will be met by the CAA and the Air Transport Association, and the CAA will pay the operation and maintenance costs. The field tests also are on a co-operative basis, with the CAA, the Army, Navy, ATA, and Gilfillan Bros., manufacturers of the equipment, working together to adapt the GCA equipment to the needs of civilian aviation.

## Plane Registration

(Continued from page 149)

for 12 months, and cost \$5 for the first one issued and \$1 for each subsequent or additional license.

Officially named "Dealer's Registration Certificates," the tags may be transferred freely from one new aircraft to another. The only requirement is that the planes be owned by the person to whom the tags are issued. A bill of sale is sufficient evidence of ownership.

**How to Apply**—Application for the "Dealer's Registration Certificates" is made on a simple form, ACA-1706, available through regional and district CAA offices. The applicant merely states on the form that he is a bona fide dealer, distributor, or manufacturer and that he is a United States citizen. Then he mails the form, with a check or money order payable to the Treasurer of the United States, for the number of registration certificates desired to the Manufacturing and Inspection Division of a CAA regional office.

Use of the dealer's tags is not compulsory. If a dealer or distributor wishes to get a formal registration certificate for each plane passing through his hands, he may do so. Most dealers will find, however, that the tags represent a substantial saving in fees and paper work.

The new "painless" registration system represents the maximum simplicity possible under the existing laws which govern aircraft titles. It is expected to ease the burden of dealers and private pilots, and at the same time lighten the load on the Registration and Recordation Section, which has been flooded with registration applications since the end of the war.

## CAA Simplifies Approval Method For Aircraft Parts

A simplified method of approving aircraft component parts, placing direct responsibility on the aviation industry, has been adopted by the Civil Aeronautics Administration.

Under the new plan, reputable manufacturers of aircraft component parts will provide purchasers with a written warranty that the parts meet CAA minimum safety requirements. Heretofore, the CAA has maintained a list of manufacturers whose products were considered satisfactory for aviation use. The list has grown unwieldy and difficult to keep up to date.

**New Specification Series**—The specifications which parts manufacturers must meet will be announced in a series of "Technical Standards Orders." In addition to aircraft components and materials, the series will contain CAA standardization policies on airports, airways and airmen, supplementing the requirements of the Civil Aeronautics Board published as Civil Air Regulations. The first of these orders, covering requirements for runway lighting, recently was issued by the Administrator's office.

Whenever possible, the CAA minimum safety requirements will follow technical standards already established, such as those of the Federal Specifications Board, Aeronautical Board, Society of Automotive Engineers, and the Aircraft Industries Association of America, Inc.

The present list of acceptable manufacturers, called the "Products and Process Specifications," will be continued only until each type of product has been covered by an appropriate Technical Standard Order.

## CAA Depicts Many Services At Cleveland Aircraft Show

Civil Aeronautics Administration services to pilots and passengers were graphically depicted to several hundred thousand persons who attended the National Aircraft Show at Cleveland, November 15 to 24.

Revealed to the general public for the first time were electrically-operated panels demonstrating CAA radio aids to navigation, originally constructed for the PICAQ delegation's visit to the CAA Experimental Station at Indianapolis.

These showed the workings of the CAA instrument landing system; radar ground controlled approach; radar aid to traffic control; the very high frequency omni-directional range; slope-line landing lights, and fire tests.

A feature of the exhibit was the CAA "inside-out" globe. The spectator entered this 12-foot sphere and saw on the map the international routes of U. S. air carriers, and the foreign offices and airways facilities maintained by CAA to assure safe operations on these routes.

The exhibit also explained the functioning of the CAA's new airport aid program, and its encouragement of urban planning; how CAA guards safety through inspection of airmen and aircraft; CAA airways services, including communications, traffic control, etc.; and the CAA pilot training research program.

Attracting special attention in the exhibit were three CAA teletype machines hooked up to bring weather reports, traffic and other information direct to the CAA booth; a device by which spectators were able to test their depth perception; a playback machine which ran off a wire recording of an aerial conversation between student and instructor; a continuous play movie of CAA air traffic control operations; and a model wind tunnel in which a wing section was subjected to a blast of air.



# Air Navigation Aids for Middle East Charted at PICAQ Regional Meeting

An air navigation system for international air travel in the Middle East was charted at a meeting attended by representatives of 23 nations, held in Cairo, October 1 to 13. The meeting was the fourth in a series of ten air-navigation regional conferences being held by the Provisional International Civil Aviation Organization to adapt world standards to regional conditions.

The United States delegation, headed by Glen A. Gilbert of the Civil Aeronautics Administration, with Robert D. Hoyt of the Civil Aeronautics Board as alternate, numbered 32 persons and included representatives of all government agencies interested as well as the industry.

**Flight Operations**—In the field of flight operations, agreement was reached as to basic procedures for the establishment of uniform instrument approach procedures at each international aerodrome, based, in general, on the same standards which have been developed within the United States. A set of visual signals to be used between aircraft in flight when radio communication is not in effect also was agreed upon. These procedures were accepted provisionally for regional use as far as practicable immediately, subject to ultimate adoption by PICAQ for worldwide use. This set of signals was particularly significant in the Middle East Region where previous incidents have occurred when radio communication between aircraft of different nationalities did not exist and it was found that no international visual signals for use between aircraft had ever been issued. One of the most controversial subjects in the field of flight operations was the system of units of measurement to be employed in the Middle East Region. Agreement finally was reached using a composite system employing English and metric units as well as the nautical mile and knots. This system was different from the one agreed upon for the European-Mediterranean Region. The difficulties encountered in developing regional units of measurement to be used in aviation point to the urgent necessity of the early development of units which will be employed uniformly on a worldwide basis.

**Air Traffic Control**—The deliberations on air traffic control in this region resulted in conclusions which were extremely satisfactory from the United States' viewpoint. A significant aspect of these decisions was the fact that boundaries of flight safety regions for air traffic control service were not required to follow national boundaries as had been the case in the European-Mediterranean Region, all decisions in this respect being based solely on technical considerations. In this respect, boundaries of seven flight safety regions were agreed upon with the control areas within each flight safety region confined to areas around principal aerodromes. It was not considered necessary to develop complete control area protection along routes between aerodromes in view of prevailing good weather in the Middle East, as well as the comparative lightness in traffic density. It was agreed that control centers for each of the flight safety regions would be located at Malta, Cairo, Khartoum, Basra, Aden, Karachi and Bangalore. In addition, approach control was recommended for 13 locations.

**Meteorological Facilities**—Meteorologically speaking, the regional meeting found that only about half of the facilities required for international civil aviation in the region are now available. Additional meteorological facilities considered necessary in this region include 185 surface observation and upper air observation stations, four meteorological aircraft reconnaissance flights and a stationary ship which would be located in the Arabian Sea. In addition, it was recommended that seven radioelectric stations be established to detect atmospheric static caused by lightning which would be very valuable in locating and forecasting thunderstorm areas.

Because of the vast desert areas in the Middle

East in which personnel operating observation stations would have great difficulty in living, it was recommended that a substantial number of (perhaps several dozen) automatic weather stations be located in the desert areas approximately 250 miles apart. A network of 30 sub-area radio broadcast stations and six area radio broadcast stations was provided to disseminate meteorological information. Under this plan, aircraft in flight, as well as ground stations, will copy meteorological information transmitted at predetermined schedules from the various radio forecast stations, utilizing international meteorological codes sent by radiotelegraph.

**Telecommunications Field**—In the field of aeronautical telecommunications and aids to air navigation, the meeting adopted many of the technical recommendations previously agreed upon at the Caribbean Regional meeting. This includes the use of 118.1 mc as the standard frequency to be employed in control towers at all regular and alternate aerodromes. In addition, the U. S. recommendations to use 8280 kc and 500 kc for emergency HF and MF channels, respectively, were adopted.

**Search and Rescue Facilities**—For search and rescue, the meeting recommended five rescue centers which will coordinate information concerning aircraft in distress and utilize the various search and rescue facilities available to the fullest possible extent. Also agreed upon were locations for six rescue alerting centers which will be tied into the rescue coordination centers by appropriate communication channels. Other recommendations for search and rescue included locations for long range, medium range and short range search and rescue aircraft, as well as surface rescue craft.

**Airports Designated**—Twenty-one regular land airports for long range operations within the region were designated, as well as alternate land airports for long range operations, regular and alternate land airports for medium range operations and regular land airports for short range operations. Proposed and existing land-plane routes were listed and tabulations of frequency of operations for 1946 and 1947 were prepared in order to present a fairly accurate picture of present and anticipated air traffic activity in the region. Each aerodrome designated for the use of international civil aviation within the region was assigned a PICAQ reference letter to indicate the standards to which the airport should be brought, and each state was asked to compare its aerodromes with the appropriate PICAQ standards and make required improvements as soon as possible.

The United States is now preparing for the South Pacific regional air navigation meeting which will be convened in Melbourne, Australia, Feb. 4, 1947. The scope of this meeting will be similar to that of the four previous meetings, with detailed analysis and study being given to the problems in the South Pacific Region. This meeting will mark the halfway point in the initial regional meetings being held by PICAQ, the five remaining regional meetings to be completed by the end of 1947.

## Correction

The illustration on page 148 of the Civil Aeronautics Journal dated November 15, 1946, showed the new type of navigation facility, the VHF omnidirectional radio range, as having two-voice channels. This facility will have only a one-voice channel.

## CAB Accident Reports

**Pan Am Willimantic Accident**—The Civil Aeronautics Board report on the Pan American Airways accident at Willimantic, Conn., June 18, attributes the fire-in-flight in the No. 4 engine nacelle to fracture of the universal joint housing of the supercharger drive shaft, breakage of the adjacent hydraulic line, and subsequent ignition of the leaking hydraulic fluid.

The flight had been in the air about 50 minutes en route from New York to London when the fire occurred. About four minutes later the engine fell out and Captain Samuel Miller made an emergency landing with wheels retracted at the Willimantic Airport, bringing down both passengers and plane safely.

The Board drew the following conclusions from its investigation:

1. The major wing structure in the vicinity of the engine nacelle was not adequately protected from possible engine nacelle fire in 049 aircraft.

2. Dural and other alloys of aluminum are not sufficiently resistant to heat to warrant their use in lines conducting inflammable fluids within the engine nacelle.

3. Having been located at the firewall, the shut-off valves afforded no protection from possible drainage of highly inflammable fluids through fractured or fire-consumed lines in Zone 3 (nacelle area aft of the firewall).

4. Because the shut-off valve mechanism cannot be actuated until after the propeller is feathered, the fuel and oil lines throughout the engine nacelle retain their respective fluids after feathering has been accomplished. The presence of such fluids within the nacelle presents a definite fire hazard.

5. The effectiveness of the firewall was seriously limited by inadequate sealing and by the use of dural fittings.

6. The design and location of the cabin supercharger drive shaft installed in the 049 until the time of this accident presented a distinct fire hazard because of its susceptibility to poor lubrication and its proximity to the hydraulic lines.

7. Petroleum base products presently in use as hydraulic fluids are excessively inflammable particularly in view of the fact that materials of lesser combustibility have already been developed. Service test has not been accomplished on any of such fluids.

8. The carbon dioxide fire extinguishing system was not adequate to extinguish the fire in Zone 2 (area between diaphragm and firewall) sufficiently to permit the flight crew to remove the fuel source and the cause of ignition.

9. The distribution of the fire extinguishing agent throughout the nacelle was inadequate for some fires. No extinguishing agent was provided in Zone 3.

**Engine Fire Causes Crash**—Engine fire-in-flight, probably caused by a leaking fuel line or connection, was responsible for an Eastern Air Lines' accident on January 18, the Civil Aeronautics Board reports. The plane crashed near Cheshire, Conn., after an intense fire lasting about two minutes weakened the left wing structure and caused it to collapse.

The fuel-line failure permitted gasoline leakage in the left engine nacelle, and the ignited gasoline burned through the nacelle weakening the wing, the CAB found. The line was completely burned in flight, indicating the need of fire-resistant lines.

A fire detection system would also have warned the pilots of the fire immediately and enabled them to take emergency measures without losing a second, the CAB said. As it was, they may not have known about the fire until someone in the cabin told them, because the engines were located outside the normal line of vision from the cockpit, and the aircraft did not have a fire detector.

## EAL and Northeast Granted New Stops In New England

Reconsideration by the CAB of the New England Case has resulted in revised route stops for Eastern Airlines and Northeast Airlines.

**New Stops for Eastern**—New Haven and Hartford, Conn., have been included on Eastern's Boston to Florida routes. This gives these two important industrial centers in New England direct one-carrier service to the resort areas of Florida and to the Carolinas and other southern states active in the textile industry, the CAB stated.

Providence, R. I., was added to Eastern's route in the original opinion, on condition that Providence be served only on flights moving between Boston and a point beyond either Richmond, Va., or Charleston, W. Va. The same restrictions apply to New Haven and Hartford service.

**Revised Service Pattern**—Northeast's certificate has been amended to provide for connecting service between Providence and the coastal points, Newport, R. I., New Bedford-Fall River, Oak Bluffs, Nantucket, Hyannis, Provincetown, and Boston, Mass.

Service to Providence was confined in the original decision to traffic over the new inland cut-off route between Boston and New York via New London.

Oak Bluffs and Nantucket, located on islands, and the Cape Cod points, Hyannis and Provincetown are likely to produce substantial traffic only during the season when they are attractive as vacation resorts, the CAB pointed out. The opinion stated that Northeast will attain a more economical operation if it is able during the winter months to augment the meager traffic generated by the Cape and island points, through a stop at Providence.

**Denies Other Petitions**—The supplemental opinion was issued by the Board after a consideration of petitions of Eastern, Northeast, Skyway Corporation, Putnam Airlines, and Norseman Air Transport to reopen, reconsider and reargue the New England Case, originally decided in June 1946. Each petition to reopen was considered on its merits, and denied, with the exception of the portions of the petitions of Eastern and Northeast approved by the decision.

## ACC and PICAQ Start Work On Multilateral Air Agreement

Work on the development of a multilateral air transport agreement to be submitted to the next assembly of PICAQ has been started by both the Air Coordinating Committee in Washington and the Air Transport Committee of the PICAQ council in Montreal, the ACC has announced.

The acceptance of such an agreement will mean that the bilateral agreements of various sorts now in force between nations will be superseded by one multilateral agreement providing standard conditions for the conduct of international air transport operations.

This action resulted from a resolution adopted by the first interim assembly of PICAQ last May which directed the council to prepare such a draft in the light of the discussion in the assembly on an earlier draft prepared by the council last winter.

Although it is too early to tell what form the new draft may take indications are that the practicability of adopting the Bermuda agreement on a multilateral basis will be closely studied in both committees, according to the ACC. The Bermuda agreement was concluded last February between the United States and the United Kingdom and provides relatively complete freedom for the development of air transport service between the two countries.

## Board Starts Proceedings Against Seven Carriers

Seven more noncertificated carriers, bringing the total up to 12, have been found by the CAB to be operating scheduled services, and have been asked to show cause why the CAB should not order them to stop this type of service.

Three of the carriers, operating out of New York City, are Willis Air Service, Air Freight and Union Southern Airlines. The other four, with headquarters in Florida, are Intercontinental Air Transport Co., Miami; Skyline, Coral Gables; Trans-Tropic Airlines, Miami; and Universal Airlines, Miami.

American Air Export and Import Co., one of the five carriers issued show-cause orders in October, has waived further hearing and agreed to confine its services to the nonscheduled type.

Operations of American Air Export and Import Co., between New York City and the three places, San Juan, Puerto Rico, Atlantic City, N. J., and Miami, Fla., have exceeded the frequency and regularity clause of the exemption order, the CAB finds.

The cease and desist order issued the carrier requires an initial report demonstrating compliance with the nonscheduled requirements (292.1 of the Economic Regulations).

The carrier must also file monthly reports for December 1946, January and February 1947, giving the regular operational data and statistics required of nonscheduled carriers, and, in addition, the frequency of its operations between specific points served during each month.

The carriers receiving the show-cause orders may adjust their cases through the CAB legal staff, if they prefer this short-cut to a hearing. Upon the carrier's request the CAB will arrange for one of its attorneys to meet with representatives of the carrier.

## CAB Denies Pan Am Request For Stops at Paris and Rome

Pan American's petition for a stop at Paris and substitution of Rome for the Naples stop has been denied by the Civil Aeronautics Board in a supplemental opinion to the North Atlantic Amendment Case. Both Paris and Rome are served by TWA.

The Board reaffirmed its original decision, issued June 14, in which it designated the Naples stop, under a one-year exemption order, on flights from London to Turkey and beyond. Because of uncertainty as to how long the Naples airport will continue to meet the requirements of scheduled 4-engine service, the Board also included Athens, Greece, in its temporary order.

Athens has a satisfactory airport, the Board said, and should provide Pan American with a traffic stop which will permit prompt inauguration of service to Turkey and, beyond, to India.

Pan American holds a permit to operate across the North Atlantic to London, and from London via intermediate points through Europe and the Near East to Calcutta, India. On August 1 the Board further authorized Pan American to extend its Central Pacific route, originating on the west coast of the United States, from Midway Island via intermediate points to Calcutta, India, connecting with its North Atlantic and Near East routes. However, the Board pointed out that operational difficulties and lack of adequate air rights have delayed the actual operation of a great portion of the international mileage certificated in the original North Atlantic case.

With the Athens stop and also the commercial air transport rights in India now agreed upon, the carrier should be able to look towards inauguration of its round-the-world service, the Board stated.

## United States and India Agree on Air Rights

The United States and India signed an air transport agreement November 14 which allows two U. S. airlines, Pan American and Trans World, routes to India and provides reciprocal rights for Indian airline service to the United States.

The agreement, defining the conditions under which scheduled air services are to be operated between the two countries, conforms with the "five freedoms" principles embodied in the Bermuda agreement but allows each country more control in applying those principles and over the air services to be operated, according to the State Department.

Provision is made for the classes of traffic which may be carried, use of airports, control of traffic rates, "change of gauge," customs duties, and exchange of information and statistics.

The Bermuda agreement, the United States-United Kingdom air transport arrangement concluded February 1946, has formed a pattern for most of the bilateral agreements the United States has concluded with other countries.

The following routes and traffic stops were specified for U. S. airlines:

**Pan American World Airways**—From the United States through Central Europe and the Near East to Karachi, Delhi, and Calcutta thence to a point each in Burma, Siam and Indo-China.

**Trans World Airline**—From the United States through Western Europe, North Africa and the Near East to Bombay, and beyond Bombay to (a) Calcutta, Burma, Indo-China, China, Japan and back to the United States over Pacific routes; (b) Ceylon, Singapore and beyond.

These routes may be operated in both directions. Until quarantine facilities are available in Bombay, TWA flights from the west will temporarily enter India at Karachi and will proceed from there to Bombay.

An Indian airline has not been designated yet for reciprocal service to this country.

## Model Municipal Airport Act Revised to Allow for Federal Aid

The Model Municipal Airport Act, originally prepared in 1944 by the National Association of State Aviation Officials, has been redrafted by the Civil Aeronautics Administration to take the Federal Airport Act into consideration.

The purpose of the model act is to provide uniform state legislation that will enable cities, towns, villages, and other political subdivisions acting jointly or independently to acquire, develop and operate airports and other air navigation facilities and to obtain federal aid.

Laws have been enacted in nearly all states on the subject. However, such laws in many instances are not adequate to enable the municipalities to meet the requirements of the Federal Airport Act for full participation in the program.

It is not anticipated by CAA that the model act, as such, will be enacted into law by many states, but rather that it will serve as a pattern in the amendment of existing state legislation to allow full participation in the Federal Aid Airport Program.

The model Municipal Airport Act is the third model act recommended by CAA and NASAO for approval by the states. A CAA redraft of a NASAO State Aeronautical Commission or Department Act was approved and published by NASAO September 1, and a model State Airport Zoning Act prepared by the CAA and National Institute of Municipal Law Officers has also been published by NASAO.

## Word to the Wise

Pilots who use their planes to show off in flights over towns and homes are rapidly becoming extremely unpopular. Harassed by pilots who "fly the ground," public protest is mounting. With the people in the frame of mind for drastic measures, the wise pilot will give up "theatrical" flying rather than surrender his right to fly. Expressing the public attitude toward "ground fliers" is the following letter addressed to the Civil Aeronautics Authority.

Gentlemen:

I am a great admirer of the airplane, but I also respect the law of gravity.

It has come to my attention of late years that increasing numbers of people are being killed in the United States by airplane crashes.

Some of these deaths are due to mechanical failures. But most of them are due to "pilot failures." By this I mean failure on the pilot's part to respect the law of gravity.

This is particularly true of our small, local airplane fliers. Many of them are fine, careful pilots, but too many more are not. They are what are commonly called "show-offs." They are constantly breaking all the laws of the Civil Aeronautics Authority on altitude over towns; "buzzing" houses for sport, and in general making a fine nuisance of themselves. They are, in reality, hurting the cause of aviation, not only by their frequent crashes and the deaths of innocent citizens, but also by turning public interest in aviation against them because of their foolish propensity to show-off by buzzing homes and flying over towns at tree-top altitudes.

Because I am a believer in the airplane as a good means of swift transportation, I have so far refrained from reporting the many violations which have come under my observation, and am instead writing this letter in the hope that it will be published and arouse public opinion among the safe pilots against low-altitude flying over houses and towns, and buzzing houses (mine in particular) for either sport or pure deviltry. I also hope this will urge the Civil Aeronautics Administration to tighten up on safe-flying enforcement.

RICHARD R. McFADDEN,  
Kingman, Kansas

## Hook Returns to Washington To Assist in Airport Program

H. Arthur Hook, veteran of nearly 20 years' service with the Civil Aeronautics Administration and its predecessor organizations, has been appointed Deputy Assistant Administrator for Airports.

Mr. Hook will serve in Washington under Charles B. Donaldson, Assistant Administrator for Airports, in the management of the federal government's share of the billion dollar airport program. He has been assistant administrator of the CAA's sixth region at Santa Monica, where he served as administrator while Joseph Marriott was in active military service.

He joined the Aeronautics Branch of the Department of Commerce in 1923 after service with the Army Corps of Engineers, as a civil engineer. He began at once the construction of airways, and worked in that capacity throughout many years of service with the CAA and its predecessor agencies. Through various positions in the airways service, he progressed to Assistant Chief of Federal Airways in 1941 in Washington before his appointment to the regional post.

## Safety Education Poster Available from the CAA

# DON'T SHOW OFF!

### Student Pilot Badly Hurt; Hits Wires While Waving to Friend

Everett Smith, local student pilot, was seriously injured today when his light plane crashed into a telephone line while he was signalling to a girl-friend on the ground.

Prior to take-off, Smith phoned an acquaintance, Helen J. Brown, her he would fly over her home and signal. When he arrived in the air, he made several low approaches, and on the last, he flew within about 26 feet above the ground. The impact caused the aircraft to crash into the top fabric of the left wing and the aircraft.

Examination of the wreckage revealed that the aircraft was in good condition. The engine was not damaged. Cause of the crash was attributed to the pilot's failure to maintain proper altitude.

Smith was taken to the hospital and is expected to recover. The aircraft was destroyed. The wreckage was removed from the scene.

The crash occurred at approximately 3:30 p.m. Smith was flying a Cessna 170. The telephone line was owned by the local telephone company.

The accident was reported by a neighbor. Smith was seen waving to his friend as he approached the ground. The crash was witnessed by several people.

The CAA is conducting an investigation into the cause of the accident. It is urging pilots to maintain proper altitude and to avoid flying over populated areas.

The CAA is also conducting a campaign to educate the public about the dangers of low-altitude flying. It is urging pilots to fly safely and to respect the law of gravity.

The CAA is also conducting a campaign to educate the public about the dangers of low-altitude flying. It is urging pilots to fly safely and to respect the law of gravity.

on beef, veal, lamb and pork.

The denial came as the American Meat Institute, high pressure lobby, reported that the industry had secured a victory in the court. The court had ruled that the industry was not required to show the above ceiling since Feb-

district OPA. The OPA had ruled that the industry was not required to show the above ceiling since Feb-

ate the industry near concerned.

ing the meal. He said he had been told that the industry was not required to show the above ceiling since Feb-

OKS' declaring to a black market. He said he had been told that the industry was not required to show the above ceiling since Feb-

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Here's how the February survey, conducted at the Institute's expense

trois since week a once controls are removed and more meat becomes available.

Here's how the February survey, conducted at the Institute's expense

# FLY RIGHT AND LIVE TO FLY

DEPARTMENT OF COMMERCE, CIVIL AERONAUTICS ADMINISTRATION

Every airport in the country has been sent the first in a "Fly Right" series of safety education posters being issued by the Civil Aeronautics Administration.

The first poster, shown above, is available without charge from the CAA Office of Aviation Information in Washington. It urges pilots, "Don't Show Off, Fly Right and Live to Fly," and depicts a cocky young flier heading for telephone wires as he waves to his girl friend from an altitude obviously too low for safety.

Announcing the distribution of these posters, Administrator T. P. Wright emphasized that the safety promotion program is preventive rather than corrective. "There were only 15.3 accident investigations for each 1,000 registered aircraft in July 1946 compared to 27.5 for each 1,000 aircraft in July 1941," the Administrator reported. "Despite this drop of 44 percent, the CAA feels that there is urgent need for further improvement, and we intend to promote

safer private flying through posters and every other means at our disposal."

In citing these figures on accident investigations, Mr. Wright pointed out that they are subject to certain limitations. First, the number of inspectors available definitely affects the number of accidents investigated. Moreover, a rate expressed only in terms of number of registered aircraft does not reflect the increased amount of flying per airplane which has taken place following the end to wartime restrictions on private flying. The CAA appreciates the fact that the number of hours or miles flown would be a much better basis for determining accident rates and is devoting intensive effort toward finding a suitable method of obtaining this vital information.

Mr. Wright expressed hope that airport operators, flight instructors, mechanics, and all others connected with private flying would cooperate in the interest of greater flying safety by placing this "Fly Right" series of posters in prominent locations.

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# Airline Orders

Nos. E-52, E-53 and E-54 direct Caribe Airways, Texas Air Lines and Trans-Caribbean Air Cargo Lines, respectively, to show cause why they should not be ordered to cease and desist from engaging in scheduled transportation in violation of sections 401(a) and 610(a)(4) of the Civil Aeronautics Act. (Oct. 22)

No. E-55 orders that Chicago and Southern Air Lines' application for a temporary exemption from the provisions of sec. 401 of the Act be set down for an expedited hearing on 10/29/46; and that notice of the hearing be served all applicants in the Mississippi Valley Case who have applications pending involving service to Hot Springs, Ark. (Oct. 23)

No. E-56 denies motion of the City of Dallas to set aside order No. 3901; orders that the exceptions and supporting discussion, accompanying the motion, be accepted as a memorandum of opposition to the findings of the examiner pursuant to sec. 285.12 of the Economic Regulations. (Oct. 24)

No. E-57 denies petition of Chicago and Southern Air Lines for an exemption order to permit it to operate flights between St. Louis, Mo., and Little Rock, Ark., Shreveport, La., and Houston, Tex., over routes 8 and 53 without stopping at Memphis, Tenn., the junction point of the two routes. (Oct. 24)

No. E-58 permits Pan American Airways to intervene in the application of Transcontinental & Western Air for approval of its agreement with the Italian Minister of Aeronautics. (Oct. 24)

No. E-59 dismisses application of Clarence W. Ludwig for certificates. (Oct. 24)

No. E-60 orders that a public hearing be held so that the Board may reconsider its denial of the petition of Pacific Overseas Airlines for leave to intervene, for consolidation and for reopening of the Hawaiian Case. (Oct. 24)

No. E-61 permits the Post Office Dept. to intervene in the application of Pan American Airways for a certificate—Docket 1803. (Oct. 24)

No. E-62 permits Colonial Airlines and Pan American-Grace Airways to intervene in the application of Pan American Airways—Docket 1803. (Oct. 24)

No. E-63 permits the Chamber of Commerce, Key West, Fla., to intervene in the application of National Airlines for amendment of certificate between the co-terminal points Tampa and Miami, Fla., and the terminal point Havana, Cuba, so as to include Key West, as an intermediate point. (Oct. 28)

No. E-64 permits the Chamber of Commerce of Allentown, Pa., to intervene in the Cincinnati-New York additional service proceeding—Docket 221 et al. (Oct. 28)

No. E-65 orders that the Board institute an investigation to determine whether Agreements CAB 728 and 739 between certain air carriers are in violation of the Act. (Oct. 28)

No. E-66 grants and denies certain parties permission to intervene in the application of Pan American Airways for a certificate—Docket 1803. (Oct. 28)

No. E-67 approves interlocking relationships existing as a result of the holding of certain positions by Beverly Howard. (Oct. 30)

No. E-68 denies motion of Southern Bus Lines for denial and dismissal of Chicago and Southern Air Lines' application (Docket 2573) and grants its motion for leave to intervene in the proceeding. (Oct. 30)

No. E-69 permits Northeast Airlines to inaugurate on Nov. 1, service to Springfield, Mass., and Keene and Portsmouth, N. H., on route 27, through the regular use of the Westfield, Dilliant-Hoykins and Portsmouth Municipal Airports. (Oct. 31)

No. E-70 permits Northeast Airlines to inaugurate on Nov. 1, 1946, nonstop services between New York, Newark, N. J., and Springfield, Mass., and between Springfield and Keene, N. H., on route 27. (Oct. 31)

No. E-71 grants American Overseas Airlines' petition for rehearing, reargument and reconsideration of the air-mail rate between New York and Foynes—Docket 1666. (Nov. 1)

E-72 grants petition of Hot Springs, Ark., for leave to intervene in the Mississippi Valley Case—Docket 548 et al. (Nov. 1)

No. E-73 grants petitions of the Chamber of Commerce of Blytheville, Ark., the City of Richmond, Ind., and the Richmond Board of Aviation Commissioners for leave to intervene in the Great Lakes Area Case—Docket 535 et al. (Nov. 1)

No. E-74 grants petitions of the Cities of Albany, Ga., and Dothan, Ala., the Chamber of Commerce of Tallahassee, Fla., Florida Airways and Orlando Airlines leave to intervene in the Kansas City-Memphis-Florida Case—Docket 1051 et al. (Nov. 1)

No. E-75 authorizes Western Air Lines to temporarily suspend service at Jackson, Wyo., on route 10 from Nov. 1, 1946 to May 31, 1947, inclusive. (Nov. 1)

No. E-76 denies application of Thomas E. Gordon, d.b.a. Orlando Airlines, for approval of the transfer of temporary certificate to Florida Airways; denies application of Thomas E. Gordon, under sec. 408 of the Act, insofar as it requests approval of the transfer of certain assets to Florida Airways. (Issued with an opinion—Oct. 31)

No. E-77 permits the City of Los Angeles and the Port of Seattle to intervene in the application of Pan American Airways for a certificate to engage in transportation within the U. S.—Docket 1803. (Nov. 5)

No. E-78 permits the City of Seattle to intervene in Docket 1803. (Nov. 5)

No. E-79 permits Chicago and Southern Air Lines to intervene in the application of Royal Dutch Air Lines (KLM) for amendment of a foreign air carrier permit—Docket 2348. (Nov. 5)

No. E-80 permits Pennsylvania-Central Airlines to inaugurate on Nov. 6, service to Wheeling, W. Va., on route 55, through the use of Wheeling, Ohio County Airport. (Nov. 5)

No. E-81 denies petition of the Port of New York Authority for leave to intervene in the Pan American-Panagra Agreement Case—Docket 2423. (Nov. 6)

No. E-82 denies petition of American Air Export and Import Co. for an exemption from the provisions of sec. 401 of the Act—Docket 2524. (Nov. 7)

No. E-83 grants petition of American Airlines for reconsideration and reargument of that portion of the Board's opinion and order (No. 4790) which denied American's application insofar as it requested authority to engage in transportation between San Francisco, Calif., and points on route 4, other than Los Angeles. (Nov. 7)

No. E-84 amends certificates of Eastern Air Lines for routes 5 and 6 so as to include New Haven and Hartford, Conn., as intermediate points, subject to a condition; amends certificate of Northeast Air Lines for route 27 so as to authorize service between

Providence and Newport, R. I., New Bedford-Fall River, Oak Bluffs, Nantucket, Hyannis, Provincetown and Boston, Mass.; denies petitions of Putnam Airlines, Skyway Corp., Norseman Air Transport, Eastern and Northeast Airlines, and the State of Conn., for rehearing and reargument in the New England Case—Docket 399 et al. (Issued with a supplemental opinion—Nov. 4)

No. E-85 grants petition of the Midland Chamber of Commerce of Midland, Tex., for leave to intervene in the application of Continental Air Lines to make permanent its certificate for that part of route 29 authorizing service between Hobbs, N. Mex., and San Antonio, Tex.—Docket 2087, et al. (Nov. 8)

No. E-86 grants petition of the San Angelo Board of City Development, San Angelo, Tex., for leave to intervene in Docket 2087, et al. (Nov. 8)

No. E-87 dismisses applications, upon the request of Skyfreight Airlines, South Air Freight Express Co., Pioneer Intermountain Airways, Federal Air Freight and Vernon E. Anderson et al. (Nov. 8)

No. E-88 grants the petitions of the Public Utilities Comm., City and County of San Francisco, Calif., the Greater Muskegon Chamber of Commerce, Muskegon, Mich., the Cities of Dallas, Tex., Newark, N. J., Philadelphia, Pa., and the Air Transport Assn. of America for leave to intervene in the Air Freight Case. (Nov. 8)

No. E-89 orders that certain exhibits in the application of Waterman Steamship Corp. and Waterman Air Lines—Docket 2405—be withheld from public disclosure. (Nov. 12)

No. E-90 dismisses, for want of prosecution, applications of Slope Air Service, K. F. Hodson, Paul Bunyan Airlines, Bemidji Airlines and Leonardo H. Rennewanz. (Nov. 12)

No. E-91 approves resolutions 1 through 4 of the third meeting of the North Atlantic Traffic Conference of IATA. (Nov. 8)

No. E-92 permits the Air Transport Assn. of America to appear as amicus curiae in the Great Lakes Area Case—Docket 535 et al. (Nov. 12)

No. E-93 denies motion of Plantation Airlines, insofar as it requests severance and consolidation of certain portions of the application of National Airlines, in Docket 2356, and restriction of the hearing; grants motion of Plantation insofar as it requests leave to intervene in Docket 2356. (Nov. 12)

No. E-94 denies petition of Eastern Airlines to reopen the record in the Southeastern States Case—Docket 501 et al. (Nov. 14)

No. E-95 through E-101 direct Air Freight, Inc., Intercontinental Air Transport Co., Skyline, Inc., Trans-Tropic Airlines, Union Southern Airlines, Universal Airlines, Inc., and Willis Air Service, Inc., respectively, to show cause why they should not be ordered to cease and desist from engaging in scheduled transportation in violation of sections 401(a) and 610 (a)(4) of the Act. (Nov. 14)

No. E-102 permits Monarch Air Lines to inaugurate on Nov. 15, service to Salt Lake City, Provo and Price, Utah, Grand Junction, Colorado, and Farmington and Albuquerque, N. Mex., on route 73, through the use of certain airports. (Nov. 15)

No. E-103 consolidates certain applications into one proceeding—the Freight Forwarder Case—Docket 681 et al. (Nov. 15)

No. E-104 denies motion of Pacific Overseas Airlines Corp. for "Leave to Offer Proof and Amend the Board's order." (See E-60). (Nov. 18)

No. E-105 grants petition of the Tulsa Chamber of Commerce, Tulsa, Okla., for leave to intervene in the application of Braniff Airways for amendment of certificates—Docket 1154 et al. (Nov. 18)

No. E-106 grants petition of the Board of Aviation Commissioners of the City of Anderson, Ind., and the Board of Aviation Commissioners of the City of Muncie, Ind., leave to intervene in the Great Lakes Area Case—Docket 535 et al. (Nov. 18)

No. E-107 authorizes Thomas E. Gordon, d.b.a. Orlando Airlines, to suspend service temporarily at Live Oak, Fla., on route 75, until further order of the Board. (Nov. 18)

No. E-108 authorizes Southwest Airways Co., to suspend service temporarily at San Jose, Calif., on route 76, until further order of the Board. (Nov. 18)

No. E-109 reinstates application of Keeshin Air Freight, Docket 910. (Nov. 18)

No. E-110 dismisses application of Chicago and Southern Air Lines for a temporary exemption under sec. 416(b) of the Act, authorizing service to Hot Springs, Ark., as an intermediate point on route 53. (Issued with an opinion—Nov. 19)

No. E-111 denies petition of Eastern Air Lines—Docket 1971. (Nov. 18)

# Airman Orders

## Suspensions

No. S-6 suspends commercial certificate of Paul C. Humphreys for 30 days because he flew at an altitude of between 300 and 500 feet over a congested area of Fargo, N. D., contrary to the provisions of sec. 60.105(a) of the Civil Air Regulations. The Board found, however, that Humphreys could have safely landed his craft in a nearby open field surrounding the congested area in the event an emergency landing became necessary. (Oct. 22)

No. S-9 suspends commercial certificate with flight instructor rating of Gerald H. Nichols for 30 days. (Oct. 28)

No. S-12 suspends airline transport certificate of Beverly C. Dickerson for 10 days because he failed to exercise reasonable care, caution, vigilance and judgment in that he landed an aircraft on the sod area of the Shreveport, La., airport when it was in an unsafe condition and when information was available to him indicating that an error had been made in his landing instructions requiring him to have circled the field to obtain other landing instructions. (Nov. 5)

No. S-14 suspends commercial certificate of Howard I. McCracken for 60 days because he flew at an altitude of 50 feet above buildings and heavy traffic over a congested area in the vicinity of West Columbia, S. Car., contrary to the provisions of sec. 60.105(a) of the Regulations. (Nov. 8)

No. S-15 suspends commercial certificate of Orin R. Alexander for 30 days commencing on Nov. 15. (Nov. 12)

No. SD-22 suspends student certificate of Wm. R. Browning for 90 days because he carried a passenger, contrary to the provisions of sec. 43.50 of the Regulations. (Sept. 10)

No. SD-23 suspends commercial certificate of James A. Burran, Jr., for 90 days because he flew acrobatically while carrying a passenger, and when neither he nor his passenger was equipped

with parachutes, in that he intentionally executed a spin, contrary to the provisions of sec. 43.409 of the Regulations. (Oct. 10)

No. SD-24 suspends commercial certificate of James H. Peppers for 60 days because he operated a civil craft at the Palmer Airport, Palmer, Alaska, other than in accordance with the provisions and limitations prescribed and set forth by the Administrator in the operations record, in that he permitted 5 passengers to ride in the craft causing the standard weight of the plane to be exceeded by 348 lbs. and the rearward center of gravity to be exceeded by 4.82", contrary to the provisions of sec. 43.1010 of the Regulations. (Oct. 11)

No. SD-25 suspends private certificate of Wm. A. Colman for 3 months because he flew over the congested area of Verga, N. J., at an altitude as low as 50 ft. above the ground, contrary to the provisions of sec. 60.105(a) of the Regulations. (Oct. 4)

No. SD-27 suspends student certificate of Albert H. Bull for 6 months because he flew in the vicinity of Millbrook, N. Y., at an altitude of less than 500 ft., contrary to the provisions of sec. 60.3503 of the Regulations. (Oct. 24)

No. SD-28 suspends commercial certificate of Orin R. Alexander for 30 days because he executed acrobatics over a congested area of Springfield, Mo., contrary to the provisions of sec. 60.104(b) of the Regulations. (Sept. 26)

No. SD-29 suspends commercial certificate of Owen H. Peters for 90 days because he flew at an altitude of 150 to 200 ft. over the campus of Iowa State College, Ames, Iowa, contrary to the provisions of sec. 60.105(a) of the Regulations. (Oct. 25)

No. SD-30 suspends private certificate of Kiser W. McDaniel for 9 months because he gave flight instruction and carried persons for hire when not properly certificated, contrary to the provisions of sections 20.80 and 20.721 of the Regulations. (Oct. 16)

No. SD-31 suspends commercial certificate of Jos. M. Williams for 30 days because, as pilot in command, he operated an aircraft in a careless manner so as to endanger the lives and property of others, in that he permitted a student to whom he was giving flight instruction, to perform maneuvers resulting in a loss of altitude to within 75 feet of the ground when he was aware that the student had a tendency to over-control the aircraft, contrary to the provisions of sec. 60.101 of the Regulations. (Oct. 29)

No. SD-32 suspends student certificate of Paul J. Khoury for 90 days because he flew over a congested area of Buffalo, N. Y., at various altitudes between 300 and 500 feet, contrary to the provisions of sec. 60.105(a) of the Regulations. (Oct. 30)

No. SD-33 suspends commercial certificate of Peter G. Knox for 6 months because he violated the provisions of sec. 60.105(a) of the Regulations in that he repeatedly circled over homes at an altitude of 100 feet and flew over the plant of the Bucyrus-Erie Co. at an altitude of between 100 and 300 feet. (Nov. 1)

No. SD-34 suspends student certificate of Paul C. Hoisington for 6 months because he carried a passenger, who was not a certificated instructor, contrary to the provisions of sec. 20.720 of the Regulations. (Oct. 31)

No. SD-35 suspends pilot certificate of Douglas C. Anderson for 6 months because, while he was the holder of a student certificate, he carried a passenger, contrary to the provisions of sec. 43.50 of the Regulations. (Oct. 30)

No. SD-36 suspends any pilot certificate held by Gerard N. Lacoste for 60 days because he flew at an altitude of 100 feet in order to way to a person on the ground and thereafter executed a climbing turn to the right and crashed, contrary to the provisions of sec. 60.101 of the Regulations. (Nov. 1)

No. SD-37 suspends commercial certificate of James M. Toth for 15 days and until he successfully passes a written exam on required parts of the Regulations. Toth permitted a plane to spiral down to 200 feet before attempting to effect recovery, contrary to the provisions of sec. 60.101 of the Regulations. (Oct. 21)

No. SD-39 suspends private certificate of Frank K. Lightfoot, Jr., for 6 months because he flew at an altitude of between 75 and 100 feet along the Salinas River in the vicinity of San Miguel, Calif., and struck electric wires, which he failed to observe, whereby the aircraft crashed to the bottom of the river, contrary to the provisions of sec. 60.101 of the Regulations. (Nov. 2)

No. SD-40 suspends private certificate of Oral R. Roota, Jr., for 6 months because he endangered the life and property of others, contrary to the provisions of sec. 60.101 of the Regulations. (Oct. 15)

No. SD-41 suspends commercial certificate of Franklin H. Stratton for 6 months, and until he successfully passes a written exam covering the required provisions of the Regulations for a commercial certificate. Stratton violated the provisions of sections 43.409 and 60.101 of the Regulations. (Nov. 5)

No. SD-42 suspends airman certificate of Olla A. Elwood for 90 days because, while the holder of a student certificate, he carried a passenger, contrary to the provisions of sec. 43.50 of the Regulations. (Nov. 5)

No. SD-43 suspends airman certificate of Lloyd L. Johnson for 6 months because, while the holder of a student certificate, he carried a passenger contrary to the provisions of sec. 43.50 of the Regulations. (Nov. 5)

No. SD-45 suspends student certificate of John E. Wells for 90 days because he violated the provisions of sec. 43.50 of the Regulations. (Nov. 6)

No. SD-51 suspends airman certificate of Wm. R. Parker for 6 months because he violated the provisions of sections 20.80, 60.72, 43.50 and 20.720 of the Regulations. (Nov. 2)

No. SD-53 suspends pilot certificate of Dumonte E. Widiger because, while the holder of a student certificate, he gave flying instruction, contrary to the provisions of sec. 20.80 of the Regulations. Widiger also carried passengers who were not certificated instructors, contrary to the provisions of sec. 20.720 of the Regulations. (Oct. 31)

## Revocations

No. S-4 revokes commercial certificate of Ralph C. Rounds because he violated the provisions of sections 60.101, 60.105(a), 60.104(b) and 43.402(b) of the Civil Air Regulations. (Oct. 21)

No. S-7 revokes commercial certificate of Wesley S. Cox because he violated the provisions of sections 60.105(b), 60.101, 20.760, 20.761 and 20.720(a) of the Regulations. (Oct. 23)

No. S-11 revokes commercial certificate of Richard K. Steinbach because he violated the provisions of sections 43.680 and 60.101 of the Regulations. (Nov. 4)

(See Official Actions page 156)

## CAA and CAB Releases

Copies of CAA releases may be obtained from the CAA Office of Aviation Information. CAB releases are obtainable from the Public Information Section of the Board. Both offices are located in the Department of Commerce Building, Washington 25, D. C.

### Administration

CAA Simplifies Aircraft Parts Approval Methods. (Nov. 8)

Airplane Registration to be Easier than Automobile, CAA Head Says. (Nov. 7)

CAA Launches Poster Drive for Further Gain in Private Flying Safety. (Nov. 10)

Border Transit Simplified for U. S. Tourist Pilots. (Nov. 13)

CAA Drops Eye Refraction Requirement and Fee Schedule for Pilot Exams. (Nov. 11)

Hook Named Deputy Assistant Administrator for Airports. (Nov. 14)

Speech by Charles B. Donaldson, Assistant Administrator for Airports, entitled, "Airport Program Moves Ahead." (Nov. 20)

### Board

New Assistant Director of CAB Economic Bureau. (Oct. 30)

Orlando Airlines denied transfer of assets and certificates to Florida Airways, Inc. (Nov. 5)

New England Case Supplemental Opinion. (Nov. 8)

Statistics—operating revenue reports of 20 domestic air carriers for first 7 months of 1946. (Nov. 14)

Pan American Traffic Stops at Naples, Italy, and Athens, Greece. (Nov. 21)

## Official Actions

(Continued from page 155)

No. SD-26 revokes student certificate of Robert F. Maher because he violated the provisions of sections 60.104(b), 60.105(a), and (b), and 60.101 of the Regulations. (Oct. 5)

No. SD-38 revokes student certificate of Allen L. Riggs because he violated the provisions of sections 43.50, 60.105(a) and 60.101 of the Regulations. (Oct. 29)

No. SD-46 revokes student certificate of Edlo W. Nolen because he violated the provisions of section 43.50 of the Regulations. (Nov. 5)

No. SD-47 revokes commercial certificate of Wm. C. Madigan because he violated the provisions of sections 60.105(b) and 60.101 of the Regulations. (Nov. 5)

No. SD-48 revokes student certificate of Wm. F. Harris because he violated the provisions of section 43.52(b) and 60.105(b) of the Regulations. (Nov. 6)

No. SD-49 revokes student certificate of Ray Hegglund because he violated the provisions of section 43.50 of the Regulations. (Nov. 5)

No. SD-50 revokes student certificate of George W. Sampson because he violated the provisions of sections 43.52(b) and (c), 60.105(a), 43.108 and 60.101 of the Regulations. (Nov. 5)

No. SD-52 revokes student certificate of Daniel Kashubara because he violated the provisions of sections 43.50 and 60.101 of the Regulations. (Nov. 6)

### Miscellaneous

No. S-3 authorizes the Administrator of Civil Aeronautics to issue a temporary NC airworthiness certificate to an airplane owned by Transcontinental & Western Air, Inc. (Oct. 17)

No. S-5 permits the Administrator to withdraw a complaint in the matter of Albert W. Smith who holds a private certificate. (Oct. 22)

No. S-8 denies petition of Richard Browning Brubaker, age 14, requesting the Board to waive the provisions of sec. 20.01(a) of the Regulations requiring an applicant for a student certificate to have attained the age of 16 years. (Oct. 24)

No. S-10 waives application of sec. 3, paragraphs (a), (b), (c), (d) and (f) of sec. 4, and paragraphs (c), (d), (e), (f) and (g) of sec. 5 of the Executive Order (No. 8251, as amended by No. 8271) with respect to the operations of Braniff Airways, Inc., in scheduled transportation into, within, and from the Canal Zone; denies, without prejudice, Braniff's application for a waiver of sec. 2 and of paragraphs (d) and (e) of sec. 4 of the Executive Order. (Oct. 30)

No. S-13 denies petition of Weston J. Gouley, age 20, requesting the Board to waive the provisions of sec. 26.1(a) of the Regulations requiring applicants for a control tower operator certificate to have attained the age of 21 years. (Nov. 7)

No. S-16 waives application of sec. 3 and of paragraphs (c), (d), (e), (f) and (g) of sec. 5 of the Executive Order (No. 8251, as amended by No. 8271) with respect to the operations of Aerovias Nacionales de Colombia, S. A., in scheduled foreign transportation into, within, and from the Canal Zone; denies, without prejudice, the application of Aerovias Nacionales de Colombia, S. A., for a waiver of sections 2 and 4 of the Executive Order. (Nov. 13)

No. SD-43 dismisses Administrator's complaint which alleged that Joseph Hunter Wilburn, who holds a student certificate, had violated certain provisions of the Regulations. (Nov. 2)

## Air Regulations . . . As of December 1, 1946

TITLE	No.	PART			MANUAL		
		Price	Date	No. of Amendments	Price	Date	No. of Amendments
Aircraft							
Airworthiness Certificates.....	01	\$0.05	10/15/42	1	None	None	
Type and Production Certificates.....	02	.05	7/1/46		\$0.10	8/1/46	
Airplane Airworthiness—Normal, Utility, Aerobatic, and Restricted Purpose Categories.....	03 <sup>1</sup>	Free	11/13/45		None	None	
Airplane Airworthiness.....	04	.15	11/1/43	5	.45	7/1/44	2
Airplane Airworthiness Transport Categories.....	04-0 <sup>1</sup>	Free	11/9/45	2	None	None	
Rotorcraft Airworthiness.....	06	.10	5/24/46		None	None	
Aircraft Airworthiness, Limited Category.....	09	Free	11/21/46		None	None	
Engine Airworthiness.....	13	.05	8/1/41		None	None	
Propeller Airworthiness.....	14	.05	7/15/42	1	.15	5/1/46	
Equipment Airworthiness.....	15	.05	5/31/46		No stock	7/1/38	
Radio Equipment Airworthiness.....	16	.05	2/13/41		Free	2/13/41	
Maintenance, Repair, and Alteration of Aircraft, Engines, Propellers, Instruments.....	18	.05	9/1/42		.50	6/1/43	
Airmen							
Pilot Certificates.....	20	.05	7/1/45	3	None	None	
Airline Pilot Rating.....	21	.05	10/1/42	3	None	None	
Lighter-than-air Pilot Certificates.....	22	.05	10/15/42	1	None	None	
Mechanic Certificates.....	24	.05	7/1/43	1 <sup>3</sup>	None	None	
Parachute Technician Certificates.....	25	.05	12/15/43	3	None	None	
Traffic Control Tower Operator Certificates.....	26	.05	10/10/45	1	None	None	
Aircraft Dispatcher Certificates.....	27	.05	7/1/46	3	None	None	
Physical Standards for Airmen.....	29	.05	1/10/46		None	None	
Operation Rules							
Air Carrier Operating Certification.....	40	.10	7/10/46	4	None	None	
Scheduled Air Carrier Operations Outside Continental U. S.....	41	.05	5/1/46	3	None	None	
Non-scheduled Air Carrier Certification and Operation Rules.....	42	.05	8/1/46	2	None	None	
General Operation Rules.....	43	.05	7/1/45	6	None	None	
Foreign Air Carrier Regulations.....	44	.05	7/1/45		None	None	
Transportation of Explosives and other Dangerous Articles.....	49	.05	7/1/45		None	None	
Air Agencies							
Airman Agency Certificates.....	50	.05	4/30/46		.15	5/15/46	
Ground Instructor Rating.....	51	.05	12/15/43	1	None	None	
Repair Station Rating.....	52	.05	10/1/42		Free	2/41	
Mechanic School Rating.....	53	.05	8/1/42	1	Free	5/40	
Parachute Loft Certificates and Ratings.....	54	.05	1/21/43		None	None	
Air Navigation							
Air Traffic Rules.....	60	.05	8/1/45	2 <sup>4</sup>	.15	10/45	
Scheduled Air Carrier Rules.....	61	.10	8/1/46	2 <sup>4</sup>	None	None	
Miscellaneous							
Rules of Practice Governing Suspension and Revocation Proceedings.....	97	Free	8/9/46		None	None	
Definitions.....	98	.05	10/15/42		None	None	
Mode of Citation.....	99	Free	11/15/40		None	None	
Regulations of the Administrator							
Aircraft Registration Certificates.....	501	Free	3/31/43		None	None	
Recordation of Aircraft Ownership.....	503	Free	3/31/43		None	None	
Notice of Construction or Alteration of Structures on or near Civil Airways.....	525	Free	7/23/43		None	None	
Seizure of Aircraft.....	531	Free	12/8/41		None	None	
Reproduction and Dissemination of Current Examination Materials.....	532	Free	1/15/43		None	None	

<sup>1</sup> Certain aircraft may comply with the provisions of this part or the 11/1/43 edition of Part 04. <sup>2</sup> Special regulations 340 and 340A. <sup>3</sup> Special regulation 355. <sup>4</sup> Special regulation 361A.

Note: Those parts and manuals for which there is a price are obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Remittances should be by check or money order, payable to the Superintendent. Current price is sent at sender's risk. Amendments and free Parts are obtained from the Publications Section, Civil Aeronautics Board, Washington 25, D. C.; free Manuals and Regulations of the Administrator from the CAA Office of Aviation Information, Dept. of Commerce, Washington 25, D. C.

## Regulations

Reg. 353-B Effective Oct. 1, 1946

Noncompliance with the requirements of § 40.253 of the Civil Air Regulations with respect to the certification of aircraft radio equipment—Special Civil Air Regulation Serial Number 353, effective December 11, 1945, waived provisions of § 40.253 of the Civil Air Regulations with respect to the certification of aircraft radio equipment. This was considered in the public interest in view of the large number of aircraft made available to the air carriers by the Army and Navy, such aircraft possessing military radio equipment which could not be replaced immediately by appropriate type certificated units. The effectiveness of this Special Civil Air Regulation, which initially would have terminated June 1, 1946, was subsequently extended to October 1, 1946, by Special Civil Air Regulation Serial Number 353-A.

IT APPEARING THAT: Due to lack of available supplies additional time is required for some operators to reconvert their aircraft equipment so that it may be type certificated, the Board considers a further extension of effectiveness of Special Civil Air Regulation Serial Number 353 in the public interest, and the notice and public procedure provided for in Section 4(a) of the Administrative Procedure Act is unnecessary with respect to the Civil Air Regulation hereinafter set forth.

NOW THEREFORE: Effective October 1, 1946, Special Civil Air Regulation Serial Number 353 is amended by striking the words "October 1, 1946" and inserting in lieu thereof the words "January 1, 1947."

## Board Denies Certificate Transfer From Orlando to Florida Airways

The Civil Aeronautics Board has denied Thomas E. Gordon, d.b.a. Orlando Airlines, permission to transfer certain assets and his temporary three-year feeder certificate of public convenience and necessity to Florida Airways, Inc., a corporation set up by Gordon in January, 1946, and controlled by him.

Gordon, who as Orlando Airlines had conducted noncertificated operations in the Florida area for over two years, was granted an experimental feeder certificate in the Florida case.

Gordon's applications sought approval of an arrangement under which Florida Airways was to receive all of Gordon's Orlando assets and his certificate, assume all Orlando liabilities and issue stock to Gordon for assets in excess of liabilities.

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# Domestic and Territorial Air Carrier Statistics

## Operations for October, 1946

Source: CAB Form 2780

Operator and routes	Revenue miles flown	Revenue passengers carried *	Revenue passenger-miles flown	Express and freight carried (tons)	Ton-miles flown		Passenger seat-miles flown	Revenue passenger load factor (percent)
					Express	Freight		
<b>All American Aviation, Inc.,</b> Pittsburgh-Huntington, Cincinnati, Jamestown, Williamsport, Philadelphia..... <b>Total</b>	<b>153,243</b>	<b>0</b>	<b>0</b>	<b>13.3</b>	<b>1,939</b>	<b>0</b>	<b>0</b>	<b>-</b>
<b>American Airlines, Inc.,</b> ..... <b>Total</b>	<b>6,281,051</b>	<b>264,620</b>	<b>139,273,410</b>	<b>3,166.0</b>	<b>633,519</b>	<b>911,531</b>	<b>184,781,863</b>	<b>75.37</b>
Los Angeles-Boston (routes 4, 18 and 23 consolidated).....	3,713,017	150,162	85,006,559	1,384.0	318,915	488,636	109,696,821	77.49
Boston-Cleveland; New York/Newark-Chicago.....	1,314,035	71,638	29,055,978	1,144.0	230,907	223,046	36,959,507	78.62
Cleveland-Nashville.....	150,036	13,082	2,575,804	136.0	12,702	3,199,460	80.51	
Washington-Chicago.....	270,784	14,493	6,049,140	130.0	28,253	32,175	8,386,693	72.13
Chicago-Fort Worth.....	568,203	28,058	12,455,236	200.0	42,329	57,712	19,695,261	63.24
Buffalo-Toronto.....	11,343	2,446	168,774	6.0	233	269	238,464	70.78
El Paso, Fort Worth or Dallas-Mexico City.....	253,663	5,315	3,961,919	146.0	0	95,341	6,605,597	59.98
<b>Branniff Airways, Inc.,</b> ..... <b>Total</b>	<b>1,109,451</b>	<b>52,567</b>	<b>19,937,408</b>	<b>227.7</b>	<b>68,064</b>	<b>30,811</b>	<b>29,089,207</b>	<b>68.54</b>
Chicago-Dallas.....	471,080	22,168	10,130,610	137.3	50,673	23,940	14,906,123	67.96
Denver-Memphis; Dallas-Brownsville or Galveston.....	569,211	31,875	8,982,227	78.8	16,013	6,502	12,771,067	70.33
Houston-New Laredo or Corpus Christi.....	69,160	4,012	824,571	11.6	1,378	360	1,412,017	58.40
<b>Caribbean-Atlantic Airlines, Inc.,</b> San Juan-Mayaguez or Christiansted..... <b>Total</b>	<b>27,515</b>	<b>4,339</b>	<b>270,147</b>	<b>6.7</b>	<b>0</b>	<b>516</b>	<b>671,563</b>	<b>40.23</b>
<b>Chicago &amp; Southern Air Lines, Inc.,</b> ..... <b>Total</b>	<b>740,068</b>	<b>33,280</b>	<b>12,624,981</b>	<b>189.8</b>	<b>58,209</b>	<b>12,489</b>	<b>19,552,376</b>	<b>64.57</b>
Chicago-New Orleans.....	377,623	20,634	7,283,277	111.0	39,537	5,426	11,205,580	65.00
Houston-Detroit.....	362,445	16,185	5,341,704	78.8	18,672	7,063	8,346,796	64.00
<b>Colonial Airlines, Inc.,</b> ..... <b>Total</b>	<b>277,362</b>	<b>12,536</b>	<b>3,728,575</b>	<b>33.1</b>	<b>8,157</b>	<b>0</b>	<b>5,213,071</b>	<b>71.52</b>
Washington-Montreal or Ottawa.....	62,845	2,215	657,261	6.4	797	0	1,186,482	55.40
New York-Burlington-Montreal or Ottawa.....	214,517	10,321	3,071,314	26.7	7,360	0	4,026,590	76.28
<b>Continental Air Lines, Inc.,</b> ..... <b>Total</b>	<b>496,267</b>	<b>18,065</b>	<b>6,692,714</b>	<b>43.6</b>	<b>8,314</b>	<b>10,499</b>	<b>10,200,461</b>	<b>65.61</b>
El Paso-Denver, San Antonio & Tulsa.....	260,913	10,816	3,379,001	17.9	4,718	2,011	5,449,172	62.01
Pueblo-Tulsa.....	42,502	3,136	531,111	4.8	353	291	880,449	60.32
Denver-Kansas City.....	192,852	6,246	2,782,602	20.9	3,243	8,197	3,870,843	71.89
<b>Delta Air Lines, Inc.,</b> ..... <b>Total</b>	<b>1,060,293</b>	<b>47,768</b>	<b>18,876,806</b>	<b>167.0</b>	<b>564,755</b>	<b>20,193</b>	<b>30,332,192</b>	<b>62.23</b>
Fort Worth-New Orleans, Charleston or Savannah.....	560,459	32,338	10,391,418	75.0	24,849	5,411	15,547,766	66.84
Chicago-Miami.....	499,834	21,875	8,485,388	92.0	31,626	14,782	14,784,426	57.39
<b>Eastern Air Lines, Inc.,</b> ..... <b>Total</b>	<b>1,060,293</b>	<b>47,768</b>	<b>18,876,806</b>	<b>167.0</b>	<b>564,755</b>	<b>20,193</b>	<b>30,332,192</b>	<b>62.23</b>
Boston-Brownsville or San Antonio.....								
Miami-Boston or Detroit.....								
Chicago-Jacksonville.....								
Miami-Tallahassee; Tallahassee-Atlanta or Nashville.....								
St. Louis-Washington or Nashville.....								
<b>Hawaiian Airlines, Ltd.,</b> Honolulu-Hilo or Port Allen..... <b>Total</b>	<b>196,080</b>	<b>21,315</b>	<b>2,396,604</b>	<b>394.1</b>	<b>9,084</b>	<b>47,477</b>	<b>3,895,164</b>	<b>74.36</b>
<b>Inland Air Lines, Inc.,</b> ..... <b>Total</b>	<b>182,819</b>	<b>7,370</b>	<b>2,071,562</b>	<b>16.0</b>	<b>2,069</b>	<b>1,584</b>	<b>3,587,233</b>	<b>57.75</b>
Denver-Great Falls.....	122,128	5,543	1,385,571	10.0	1,154	609	2,447,070	56.61
Huron-Cheyenne.....	60,691	2,315	685,991	6.0	915	975	1,139,563	60.20
<b>Mid-Continent Airlines, Inc.,</b> ..... <b>Total</b>	<b>509,706</b>	<b>23,760</b>	<b>7,144,937</b>	<b>42.5</b>	<b>13,238</b>	<b>0</b>	<b>10,192,398</b>	<b>70.10</b>
New Orleans-Minneapolis-Minot.....	383,421	17,751	5,263,169	35.3	10,914	0	7,591,864	69.33
Minneapolis-Kansas City & St. Louis.....	126,285	6,764	1,881,768	7.2	2,324	0	2,600,534	72.36
<b>National Airlines, Inc.,</b> ..... <b>Total</b>	<b>838,076</b>	<b>27,581</b>	<b>16,176,589</b>	<b>46.0</b>	<b>17,934</b>	<b>13,435</b>	<b>22,410,568</b>	<b>72.18</b>
New York/Newark-Miami & Key West.....	590,753	19,062	12,083,637	37.0	14,350	12,910	16,557,260	72.98
New Orleans-Jacksonville & Miami.....	247,323	10,160	4,092,952	9.0	3,584	525	5,853,308	69.93
<b>Northeast Airlines, Inc.,</b> New York/Newark-Caribou or Boston; Boston or Burlington-Montreal; Bangor-Montreal..... <b>Total</b>	<b>460,851</b>	<b>44,723</b>	<b>8,793,972</b>	<b>173.7</b>	<b>31,351</b>	<b>0</b>	<b>14,996,443</b>	<b>58.64</b>
<b>Northwest Airlines, Inc.,</b> N. Y. & Chicago-Seattle & Portland; Grand Forks-Winnipeg (routes consolidated July 29, 1946)..... <b>Total</b>	<b>1,822,481</b>	<b>64,379</b>	<b>37,797,006</b>	<b>252.8</b>	<b>146,119</b>	<b>0</b>	<b>51,265,351</b>	<b>73.73</b>
<b>Pennsylvania-Central Airlines Corporation</b> ..... <b>Total</b>	<b>1,590,943</b>	<b>125,693</b>	<b>33,292,375</b>	<b>1,101.0</b>	<b>166,775</b>	<b>87,394</b>	<b>55,268,518</b>	<b>60.24</b>
Norfolk-Chicago-Milwaukee (routes 14 and 32 consolidated).....	1,043,328	120,466	23,026,951	738.0	107,773	44,334	37,164,215	61.96
Washington-Buffalo.....	105,695	5,860	1,324,510	29.0	3,391	1,470	2,191,983	60.43
Detroit-Sault Ste. Marie.....	34,179	3,355	485,155	10.0	798	274	721,112	67.28
Pittsburgh-Buffalo.....	60,838	3,464	616,291	55.0	4,876	3,860	1,241,980	49.62
Norfolk-Knoxville.....	82,930	4,094	907,660	11.0	1,407	1,012	1,728,649	52.51
New York/Newark-Birmingham.....	263,973	20,229	6,931,790	258.0	48,530	36,444	12,220,570	56.72
<b>Pioneer Air Lines, Inc.,</b> Houston-Amarillo..... <b>Total</b>	<b>91,600</b>	<b>2,457</b>	<b>651,000</b>	<b>2.2</b>	<b>733</b>	<b>0</b>	<b>2,193,870</b>	<b>29.67</b>
<b>Transcontinental &amp; Western Air, Inc.,</b> ..... <b>Total</b>	<b>2,707,836</b>	<b>58,336</b>	<b>46,950,293</b>	<b>725.0</b>	<b>288,104</b>	<b>213,374</b>	<b>58,480,731</b>	<b>80.28</b>
San Francisco-Washington-New York/Newark-Boston.....	2,247,294	56,808	39,176,775	526.0	223,705	154,797	49,078,880	79.82
Kansas City-New York/Newark or Pittsburgh.....	352,618	11,033	6,009,433	128.0	53,843	51,740	7,198,163	85.49
St. Louis-Detroit.....	107,924	6,432	1,764,085	71.0	10,556	6,837	2,203,688	80.05
<b>United Air Lines, Inc.,</b> ..... <b>Total</b>	<b>4,956,582</b>	<b>168,608</b>	<b>102,592,431</b>	<b>2,039.0</b>	<b>688,787</b>	<b>669,484</b>	<b>125,485,714</b>	<b>81.76</b>
Oakland-New York/Newark-Boston-Washington (routes 62 and 66 consolidated with route 1A, effective 10/1/46).....	3,306,622	91,632	70,564,700	1,650.0	613,750	571,161	85,168,263	82.85
Salt Lake City-Seattle-Spokane.....	292,731	13,130	5,980,593	50.0	19,686	15,875	7,799,824	76.79
Seattle-San Diego.....	1,303,636	64,766	25,342,216	331.0	53,271	82,222	31,266,439	81.05
Denver-Cheyenne.....	11,040	712	67,776	1.0	186	201	228,000	29.73
Seattle-Vancouver.....	29,336	4,414	537,898	6.0	1,804	4	752,558	71.48
Los Angeles-Catalina.....	13,217	2,058	90,248	1.0	0	21	270,630	33.35
<b>Western Air Lines, Inc.,</b> ..... <b>Total</b>	<b>921,694</b>	<b>51,274</b>	<b>21,115,801</b>	<b>178.3</b>	<b>57,753</b>	<b>22,907</b>	<b>34,487,993</b>	<b>61.23</b>
San Diego-Salt Lake City.....	283,327	15,889	4,344,110	39.4	9,435	3,106	6,812,777	63.76
Salt Lake City-Great Falls.....	93,363	3,607	976,892	15.0	2,584	842	1,890,535	51.67
Great Falls-Lethbridge.....	9,124	688	99,604	1.5	188	2	181,990	54.73
Los Angeles-San Francisco or Oakland.....	235,599	23,286	7,639,314	72.0	9,751	13,376	11,949,738	65.93
Los Angeles-Denver.....	302,281	10,919	8,055,881	50.4	35,795	5,581	13,652,953	59.00
<b>Total</b> .....								

\* The total passengers carried for each airline is an unduplicated figure.

(See Domestic and Territorial Air Carrier Statistics page 158)

# Domestic and Territorial Air Carrier Statistics—Concluded

## Operations for the First Ten Months of 1946 as Compared With the Same Period of 1945

Operator	Revenue miles flown January-October		Revenue passengers carried (unduplicated) January-October		Revenue passenger-miles flown January-October		Express and freight carried (tons) January-October	
	1946	1945	1946	1945	1946	1945	1946	1945
All American Aviation, Inc.	1,463,209	1,231,565	0	0	0	0	80.1	63.1
American Airlines, Inc.	51,483,048	37,163,538	2,013,919	1,054,779	1,057,769,491	619,540,023	15,347.0	11,739.5
Branniff Airways, Inc.	9,486,715	6,624,386	439,056	272,468	177,256,394	118,639,034	1,453.7	897.0
Caribbean-Atlantic Airlines, Inc.	271,891	231,831	40,658	26,356	2,165,109	1,610,270	68.0	114.0
Chicago & Southern Air Lines	6,766,365	4,114,261	297,558	158,255	117,516,725	67,825,378	1,060.7	731.9
Colonial Airlines, Inc.	2,620,840	1,371,235	131,226	77,135	38,966,431	23,279,659	181.0	94.5
Continental Airlines, Inc.	4,627,292	2,879,233	177,181	98,795	65,851,471	38,258,838	260.0	177.5
Delta Air Lines, Inc.	9,001,503	4,755,225	417,767	223,727	171,253,866	84,054,087	1,014.0	552.2
Eastern Air Lines, Inc.	21,206,046	972,351	729,036	128,273	361,423,361	18,342,978	2,548.8	3,397.6
Hawaiian Airlines, Ltd.	1,591,515	1,344,993	203,571	48,638	28,874,038	18,342,978	2,548.8	2,704.8
Inland Air Lines, Inc.	1,682,874	2,385,791	69,577	121,394	19,279,445	14,310,053	79.5	44.3
Mid-Continent Airlines, Inc.	4,283,477	4,083,062	208,851	120,696	63,530,842	33,622,369	335.4	171.3
National Airlines, Inc.	7,135,140	9,572,770	235,948	138,737	70,332,335	29,520,802	513.7	171.5
Northeast Airlines, Inc.	15,376,875	8,255,729	526,304	317,092	321,300,829	169,708,099	1,601.3	1,251.9
Northwest Airlines, Inc.	14,375,950	8,255,729	1,136,687	606,083	317,320,284	150,231,212	5,049.0	3,338.6
Pennsylvania-Central Airlines Corp.	819,843	177,337	16,498	2,297	4,709,545	682,813	15.9	1.4
Pioneer Air Lines, Inc.	36,209,920	25,326,853	791,459	463,595	669,851,610	412,008,681	8,729.4	7,343.6
Transcontinental & Western Air, Inc.	45,161,229	31,317,367	1,495,075	621,637	903,004,687	475,001,368	9,229.4	5,142.4
United Air Lines, Inc.	7,142,156	4,236,218	405,689	185,485	161,909,374	76,265,857	1,135.0	581.6
Western Air Lines, Inc.								
Total	170,361,302	100.00	5,347,479	100.00	2,751,023,023	100.00	38,734.6	100.00
Index (1945=100)								

Operator	Ton miles flown		Passenger seat-miles flown January-October		Revenue passenger load factor (percent) January-October	
	Express January-October	Freight January-October	1946	1945	1946	1945
All American Aviation, Inc.	10,457	9,858	0	0	—	—
American Airlines, Inc.	3,740,701	5,027,431	4,246,255	697,911	1,258,270,419	685,869,822
Branniff Airways, Inc.	441,990	421,410	165,254	0	219,906,783	132,461,496
Caribbean-Atlantic Airlines, Inc.	1,796	7,514	3,410	1,948	5,345,142	3,107,371
Chicago & Southern Air Lines	371,853	301,654	23,282	0	161,448,345	85,346,819
Colonial Airlines, Inc.	48,696	27,171	0	0	52,406,695	28,745,721
Continental Airlines, Inc.	55,348	76,815	47,241	0	96,231,416	48,265,094
Delta Air Lines, Inc.	390,655	200,001	71,803	0	233,908,470	98,959,114
Eastern Air Lines, Inc.	2,008,024	15,236	413,212,427	87.47		
Hawaiian Airlines, Ltd.	90,550	303,057	292,827	107,558	33,412,140	19,505,880
Inland Air Lines, Inc.	15,914	9,687	2,931	0	30,346,442	19,740,670
Mid-Continent Airlines, Inc.	105,319	50,077	0	0	84,448,879	44,707,406
National Airlines, Inc.	185,003	106,005	17,919	0	174,715,630	63,080,753
Northeast Airlines, Inc.	89,459	31,262	0	0	101,244,211	39,690,967
Northwest Airlines, Inc.	917,881	687,825	377,574,895	190,680,946	190,680,946	85.10
Pennsylvania-Central Airlines Corp.	971,370	734,854	173,379	0	436,058,774	182,129,022
Pioneer Air Lines, Inc.	5,090	379	0	0	10,620,612	1,304,907
Transcontinental & Western Air, Inc.	3,224,265	3,708,104	1,768,039	34,374	778,135,213	454,159,469
United Air Lines, Inc.	4,236,122	4,012,007	2,926,531	0	1,046,592,273	498,796,684
Western Air Lines, Inc.	318,821	234,971	123,095	0	213,503,131	87,164,473
Total	17,959,536	803,027	3,096,909,041	88.83		
Index (1945=100)	100.00	—	100.00	—		

	January	February	March	April	May	June	July	August	September	October	Total
Passengers carried (unduplicated)	661,480	667,376	828,276	953,000	1,032,212	1,173,699	1,218,458	1,367,345	1,296,567		
Passenger-miles flown (total revenue and non-revenue)	336,897,337	337,356,042	413,367,422	469,093,606	521,643,616	573,185,511	582,226,933	638,310,579	625,367,788		

\* Express and freight ton-miles combined under express prior to July 1945.  
NOTE.—Effective January 1, 1946, all revenue traffic statistics are reported to the CAB on the basis of direct airport-to-airport distances. For purposes of comparability, those traffic statistics reported prior to that date on the basis of course-flown distances have been converted to reflect direct airport-to-airport distances.

## Ownership Assured

(Continued from page 149)

undertake any Class 4 or 5 airport projects, that is, the large terminal fields. The Act requires the CAA to submit to Congress a list of such proposed projects at least two months in advance of the fiscal year during which they are to be built. In other words, July 1, 1947, is now the earliest date we can aid a large airport project. We propose, however, to present to the Congress in January a request for an amendment to permit allotments for Class 4 and Class 5 projects this year. If the amendment is adopted, there will be a need for additional appropriations."

Pointing out the need for expanding the country's airport system, Mr. Donaldson said: "Today only about one out of four communities in this nation has an airport. Even if your community happens to be among that lucky 25 percent, it suffers by the lack of airports in other towns. The limited number of places to which citizens of your city can fly restricts their use of your own airport, and at the same time it reduces the volume of out-of-city trade which you

can hope to attract to your airport and your community.

"Moreover, it is very likely that your airport needs improvement or even replacement. Many towns get restricted air service or none at all because of inadequate airports. In some cases this can be remedied by improvement of your existing airport. In others, the airport is so blocked off by surrounding development or so poorly located in relation to the users, that it is more economical to start anew at a more carefully selected site.

"The initiative for such projects, of course, must come from the officials of local governmental units, but the CAA stands ready to give you every bit of help we can," Mr. Donaldson declared. "Our district airport engineers will be happy to consult with you on such matters as the drawing up of a comprehensive airport plan for your metropolitan area, site etc. Offices have been opened in practically every state to help you on these problems, to assure prompt handling of your project request, and generally to follow through the CAA end of this joint activity until completion of each project."

## 132 Airport Towers Scheduled For CAA Operation This Year

The number of airport towers which the Civil Aeronautics Administration plans to have in operation this fiscal year has grown to 132.

Funds allotted by Congress provide for CAA operation of 128 towers, plus the Washington National Airport tower previously operated by the CAA as a part of the airport. In addition three city governments have asked the CAA to take over the operation of their towers, and have transferred the necessary funds to the CAA for this purpose.

The three towers being operated with municipal funds are at Rosecrans Field, St. Joseph, Mo., Orchard Place Airport, which Chicago has taken over for use as a second municipal airport, and John Rodgers Field, Honolulu, T. H.

The CAA has 113 airport towers in operation at present. The job of equipping and staffing the remaining 19 is proceeding as rapidly as possible.

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